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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,390	10/22/2001	Rajdeep Kalgutkar	57091US002	1082
32692	7590	03/07/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			WONG, LESLIE	
			ART UNIT	PAPER NUMBER
			2164	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/014,390	KALGUTKAR ET AL.	
	Examiner	Art Unit	
	Leslie Wong	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/18/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. Claims 5-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed to an environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C 101.

Claim 5 merely recites the steps of "selecting a first component and selecting a second component from the database..." Claim 5 does not contain limitations to produce a practical application because it appears that the claim lacks the step that would produce a tangible result.

Applicants may choose to amend the step of "displaying the selected components..." to claim 5 in order to overcome the above 101 rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 5-12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lackritz et al.** ("Lackritz") (US 2001/0031122 A1) in view of **Bogdanowicz et al.** ("**Bogdanowicz**") (US 5555085 A).

Regarding claim 5, **Lackritz** teaches a method of optimizing the performance of a light curing polymer system including multiple component types, the component types including a light source, a photoinitiator and a substrate, where the light source is arranged to radiate its light through the substrate to the photoinitiator, the light source operating at a set of wavelengths, the substrate allowing only a set of wavelengths of light to pass there through and the photoinitiators only activated when it is irradiated with a set of wavelengths (§s 0004, 0007, 0008, 0069), the method of optimizing including the steps of:

a). selecting a first component, said first component operating at first set of wavelengths defining a first wavelength spectrum (§s 0007, 0039);

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b). selecting a second component from of a type different than the type of the first component, the second component operating at a second set of wavelengths and having a second wavelength spectrum, at least one of said second set of wavelengths being present in said first set of wavelengths (§s 0038, 0040).

Lackritz does not explicitly teach a “database”.

Bogdanowicz teaches a database as database for storing filter transmittance data from the light source (col. 5, lines 24-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of the cited references because **Lackritz’s** teaching would have allowed **Bogdanowicz’s** to facilitate retrieval of data to determine if a further filter selected is needed in order to achieve the desired balance as suggested by **Bogdanowicz** at (col. 5, lines 24-26).

Regarding claims 6 and 7, **Lackritz** further teaches wherein wavelength regions are established and a representative name is assigned to each wavelength region (§s 0007, 0008, and 0042, 0052; Fig. 3).

Lackritz does not explicitly teach a “database”.

Bogdanowicz, however, teaches a database as database for storing filter transmittance data from the light source (col. 5, lines 24-32).

Regarding claim 8, **Lackritz** further teaches wherein said representative names of the selected first component are compared to the representative names of the

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plurality of second components so that only a second component having at least one representative name in common with the selected first component can be chosen (§s 0034, 0053, and 0056).

Regarding claim 9, **Lackritz** further teaches selecting a third component different than the first or second component from a plurality of possible third components, the third component operating at a third set of wavelengths and having a third wavelength spectrum, at least one of said third set of wavelengths being present in said third set of wavelengths (§s 0034, 0053, and 0057).

Lackritz does not explicitly teach a “database”.

Bogdanowicz, however, teaches a database as database for storing filter transmittance data from the light source (col. 5, lines 24-32).

Regarding claim 10, **Lackritz** teaches method of comparing characteristics of components of a light curing polymer system where a light source is directed through the substrate to the photoinitiator, the light source operating at a first range of wavelengths, the substrate allowing only a second range of wavelengths of light to pass there through and the photoinitiator only being activated when it is irradiated with a third range of wavelengths (§s 0004, 0007, 0008, 0069), the method of comparing including the steps of:

- b). selecting a first component (§s 0039 and 0056);
- c). selecting a second component (§s 0048 and 0056);

Lackritz does not explicitly teach the steps of:

- a). storing the characteristics of the constituent in memory, the characteristics including name and wavelength response;
- d). graphically displaying on the same display, the name and wavelength response of the first component and the second component.

Bogdanowicz, however, the steps of:

- a). storing the characteristics of the constituent in memory, the characteristics including name and wavelength response (col. 3, lines 6-14; col. 5, lines 57-61);
- d). graphically displaying on the same display, the name and wavelength response of the first component and the second component (col. 5, lines 57-61; col. 6, lines 16-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of the cited references because **Lackritz's** teaching would have allowed **Bogdanowicz's** to allow the photographer to select a desired set of filters for use in matching the light source to the photographic material and to determine if a further filter selected is needed in order to achieve the desired balance as suggested by **Bogdanowicz** at (col. 5, lines 15-20 and 24-26).

Regarding claims 11-12, **Lackritz** further teaches determining an area of an overlapping region of the wavelength responses of the first and second components (§ 0094).

Regarding claims 14-15, **Bogdanowicz** further teaches the steps of:

a). presenting on a display a menu for selection of a component from a database, the database including at least a set of first components of a first component type and a set of second components of a second component type (col. 3, lines 6-10 and 29-32; col. 5, lines 15-25).

b). presenting on the display at least one second component chosen from the set of second components, each of the chosen at least one second component operating at a second set of wavelengths and having a second wavelength spectrum, the at least one second component chosen because at least one of said second set of wavelengths is present in the first set of wavelengths, wherein the second component is selected from the at least one second component displayed (col. 3, lines 6-10 and 29-32; col. 5, line 57 – col. 6, line 3).

Response to Argument

4. Applicant's arguments filed 18 November 2005 have been fully considered but they are not persuasive.

Applicants' argue that Lackritz teaches away from the Applicants' invention and contrary to the examiner's assertion, Lackritz teaches "methods for producing optical waveguides, and other such component or devices which require patterns of altered index of refraction or thickness in transparent polymer multilayer structures..."

In response to the preceding arguments, Examiner respectfully submits that Applicants are reminded that in order to disqualify a reference based on a "teach away"

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reasoning, the reference has to explicitly suggest or disclose the so-called teach away steps – Applicants assertion can not be accepted if it is unsupported by a valid evidence.

Applicants' claim recites:

- a). selecting a first component, said first component operating at first set of wavelengths defining a first wavelength spectrum (¶s 0007, 0039);
- b). selecting a second component from of a type different than the type of the first component, the second component operating at a second set of wavelengths and having a second wavelength spectrum, at least one of said second set of wavelengths being present in said first set of wavelengths.

Examiner submits that the limitation as claimed are broad; therefore, they read on the teaching of Lackritz: **the first type of photosensitive molecule 302**, with its strong response at a longer wavelength 306, is activated first using a lamp/filter combination with a sharp wavelength cutoff below lower threshold set by the properties of **second type of photosensitive molecule 304** (¶ 0039).

Applicants argue that it is unclear what motivation, even including the impermissible use of the present application, would lead one of ordinary skill in the art of building light curing polymer system to solutions in the photographic arts. Bogdanowicz adds nothing other than the word database to the rejection and there is no motivation to combine the teachings of Bogdanowicz with the teachings of Lackritz.

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In response to the preceding arguments, Examiner respectfully submits that Applicants' invention is directed to using photocuring to reduce costs and improve environmental compliance while providing high quality bonding. In photocuring, a light source is placed so that the light can interact with certain chemicals in the materials to be bonded. Such a curing method can be used in coatings, furniture, electronics, packaging etc... and many other applications. Fields in which photocuring can be used include **graphic arts imaging**, printing plates, **photoresists**, solder masks etc... (Applicants' Specification page 1, lines 5-13). Lackritz is related to methods for producing optical waveguides, and other such component or devices with inhere patterns of altered index of refraction or thickness in transparent polymer multilayer structures (§0004). In a preferred embodiment, the process for creating an optical polymeric waveguide may comprise the steps of: (a) creating an optical multiple layer stack, mechanically and chemically stabilized by activating a first type of photosensitive molecule by expose to a first wavelength, which may be, for example, visible light, causing sufficient linking of the polymer molecules to at least prevent the layers of the stack from flowing; (b) patterning with a second wavelength of light for example with ultraviolet (UV) light, the second wavelength activating a second type of photosensitive molecule which enable an optical waveguide to be defined (§0029). Bogdanowics is drawn to a system for analysis of a photographic light source to which a light sensitive medium is to be exposed which comprises spectral measurement means for measuring spectral intensities of the photographic light source at predetermined increments of wavelength in each of a plurality of color (col. 2, lines 1-9). Further, Bogdanowics teaches the use of a database

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of filter transmittance data to achieve the desired balance. The system is designed to predict the performance of an optimum filter – light – photographic material in a rapid and accurate manner and, in this way, allow the photographer to select a desired set of filters for use in matching the light source to the photographic material. In this mode, a light source used for exposure needs to be corrected spectrally in order to achieve the proper color balance (col. 5, lines 15-26). Although Bogdanowics's curing system is being using in a different application - graphic arts, it is submitted that based on Applicants' disclosure the photocuring fields can be applied in many applications, one of the listed applications is graphic art as specified from the above paragraph. Lackritz teaches photodefinition of optical devices by select and apply various wavelengths spectrum and Bogdanowics teaches utilizing a database to achieve desired result by matching the light source to the material. Both prior arts teach similar subject matters and are in the same field of endeavor of the claimed invention. Therefore, it is submitted that combining Lackritz and Bogdanowics would have arrived at the claimed invention

Further, Applicants argue that Lackritz does not teach or suggest the presently claimed method for optimizing performance of a light curing polymer system using a single light source and that the present rejection of claims 5 and 10 is therefore traversed.

In response to the preceding arguments, Examiner respectfully submits that, the recitation “ optimizing the performance of a light curing polymer system including

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multiple component types, the component types including a light source, a photoinitiator and a substrate” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES RONES can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leslie Wong
Primary Patent Examiner
Art Unit 2164

LW
February 28, 2006